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FEDERAL COMMUNICATIONS COMMISSION

[ET Docket No. 14-14 and GN Docket No. 12-268; DA 14-852]

Office of Engineering and Technology Seeks Comment on Measurements of LTE into DTV Interference

AGENCY: Federal Communications Commission.

ACTION: Notice.

SUMMARY: In this document, the Federal Communications Commission's (Commission) Office of Engineering and Technology (OET) seeks to supplement the record in the incentive auction proceeding by inviting comment on measurements of wireless Long-Term Evolution (LTE) interference into digital television (DTV) receivers conducted by OET engineers

DATES: Comments must be filed on or before July 11, 2014.

ADDRESSES: You may submit comments, identified by ET Docket No. 14-14 and GN Docket No. 12-268, by any of the following methods:

- Federal Communications Commission's Web Site: <http://fjallfoss.fcc.gov/ecfs2/>. Follow the instructions for submitting comments.
- Mail: Robert Weller, Office of Engineering and Technology, Electromagnetic Compatibility Division, Room 76-A140, Federal Communications Commission, 445 12th Street, SW, Washington, DC 20554.
- People with Disabilities: Contact the FCC to request reasonable accommodations (accessible format documents, sign language interpreters, CART, etc.) by e-mail: FCC504@fcc.gov or phone: 202-418-0530 or TTY: 202-418-0432.

For detailed instructions for submitting comments and additional information on the process, see the SUPPLEMENTARY INFORMATION section of this document.

FOR FURTHER INFORMATION CONTACT: Robert Weller, Office of Engineering and Technology, (202) 418-7397, e-mail Robert.Weller@fcc.gov, and TTY (202) 418-2989.

SUPPLEMENTARY INFORMATION: This is a summary of the Commission's document, ET Docket No. 14-14, DA 14-852, released June 20, 2014. The full text of this document is available for inspection and copying during normal business hours in the FCC Reference Center (Room CY-A257), 445 12th Street, SW., Washington, DC 20554. The complete text of this document also may be purchased from the Commission's copy contractor, Best Copy and Printing, Inc., 445 12th Street, SW, Room, CY-B402, Washington, DC 20554. The full text may also be downloaded at: www.fcc.gov.

Pursuant to §§ 1.415 and 1.419 of the Commission's rules, 47 CFR 1.415, 1.419, interested parties may file comments on or before the date indicated on the first page of this document. Comments may be filed using the Commission's Electronic Comment Filing System (ECFS). See Electronic Filing of Documents in Rulemaking Proceedings, 63 FR 24121 (1998).

- Electronic Filers: Comments may be filed electronically using the Internet by accessing the ECFS: <http://fjallfoss.fcc.gov/ecfs2/>.
- Paper Filers: Parties who choose to file by paper must file an original and one copy of each filing. If more than one docket or rulemaking number appears in the caption of this proceeding, filers must submit two additional copies for each additional docket or rulemaking number.

Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail. All filings must be addressed to the Commission's Secretary, Office of the Secretary, Federal Communications Commission.

- All hand-delivered or messenger-delivered paper filings for the Commission's Secretary must be delivered to FCC Headquarters at 445 12th Street, SW, Room TW-A325, Washington, DC 20554. The filing hours are 8:00 a.m. to 7:00 p.m. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes and boxes must be disposed of before entering the building.
- Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9300 East Hampton Drive, Capitol Heights, MD 20743.
- U.S. Postal Service first-class, Express, and Priority mail must be addressed to 445 12th Street, SW, Washington DC 20554.

People with Disabilities: To request materials in accessible formats for people with disabilities (braille, large print, electronic files, audio format), send an e-mail to fcc504@fcc.gov or call the Consumer & Governmental Affairs Bureau at 202-418-0530 (voice), 202-418-0432 (tty).

Summary

1. On June 20, 2014, OET issued a public notice seeking to supplement the record in the incentive auction proceeding by inviting comment on measurements of wireless Long-Term Evolution (LTE) interference into digital television (DTV) receivers conducted by OET engineers.

2. In the inter-service interference (ISIX) public Notice, OET invited comment on a methodology for predicting ISIX. For purposes of that methodology, OET assumed that the wireless services operating in the new 600 MHz Band will appear noise-like to the DTV receiver and hence, that the interference potential from LTE will be nearly identical to DTV-to-DTV interference. In addition, OET incorporated an off-frequency rejection (OFR) factor as a function of varying degrees of spectral overlap due to filter roll-off in the misaligned future wireless blocks and existing TV channels in the 600 MHz Band. OET also added 0.8 dB to the interfering wireless signal to account for the possibility of co-channel power from multiple wireless blocks affecting one 6 MHz TV channel. Several commenters raised concerns about these assumptions which form the basis for the D/U ratios of Table 8, the OFR values of Table 9, and the assumed effective radiated power (ERP) in Table 10 of the ISIX Notice.

3. In April 2014, OET engineers tested the characteristics of LTE-into-DTV interference in the FCC Laboratory, and the results of those measurements are presented in the report. As explained in the report, four DTV receivers were tested in order to obtain a reasonable indication of their behavior in the presence of an interfering LTE eNodeB signal.

4. Additionally, the Consumer Electronics Association (CEA) submitted measurements of LTE to DTV interference on six newer model television receivers and two older model receivers.

Specific Topics of Comment

5. OET seeks comment on the measurements and observations discussed in OET's Report. Specifically, OET seeks comment on whether these measurements, in conjunction with CEA's measurements, support the D/U ratios, OFR, and power adjustments that appear in in Tables 8, 9, and 10 of the ISIX Notice.

6. OET also seeks comment on the relevance of the measurements associated with two receiver models that are more than 7 years old. The OET Report contains measurements of a 2007 model year receiver and the CEA Report contains measurements of a 2006 model year receiver. OET anticipates that these receivers will no longer be commercially available and will be approaching the end of their useful lifecycle at the time of the wireless build out in the 600 MHz Band.

7. The Notice was issued pursuant to § 0.31 of the Commission's rules by the Office of Engineering and Technology, a member of the Incentive Auction Task Force.
Federal Communications Commission.

Julius P. Knapp,
Chief, Office of Engineering and Technology.

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